

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

DYNAMIC 3D GEOSOLUTIONS LLC,

PLAINTIFF,

v.

HALLIBURTON COMPANY;
HALLIBURTON ENERGY SERVICES, INC;
LANDMARK EXPLORATION AND
PRODUCTION SOFTWARE AND
SERVICE, INC.; AND
LANDMARK GRAPHICS CORPORATION

DEFENDANTS.

CASE NO.: 1:14-cv-00111

JURY TRIAL DEMANDED

DYNAMIC 3D GEOSOLUTIONS LLC,

PLAINTIFF,

v.

SCHLUMBERGER LIMITED
(SCHLUMBERGER N.V.);
SCHLUMBERGER HOLDINGS
CORPORATION; AND SCHLUMBERGER
TECHNOLOGY CORPORATION

DEFENDANTS.

CASE NO.: 1:14-cv-00112

JURY TRIAL DEMANDED

DYNAMIC 3D GEOSOLUTIONS LLC,

PLAINTIFF,

v.

EMERSON ELECTRIC CO.,
EMERSON PROCESS MANAGEMENT
LLLP, ROXAR, INC. AND
ROXAR AS,

DEFENDANTS.

CASE NO.: 1:14-cv-00526

JURY TRIAL DEMANDED

DYNAMIC 3D GEOSOLUTIONS LLC,

PLAINTIFF,

v.

LMK RESOURCES, INC. AND
LMKR HOLDINGS,

DEFENDANTS.

CASE NO.: 1:14-cv-00527

JURY TRIAL DEMANDED

DYNAMIC 3D GEOSOLUTIONS LLC,

PLAINTIFF,

v.

PARADIGM, B.V.,
PARADIGM GEOTECHNOLOGY, B.V.,
PARADIGM GEOPHYSICAL CORP.,
PARADIGM LTD. AND
PARADIGM SERVICES CORP.,

DEFENDANTS.

CASE NO.: 1:14-cv-00528

JURY TRIAL DEMANDED

DYNAMIC 3D GEOSOLUTIONS LLC,

PLAINTIFF,

v.

IHS INC. AND
IHS GLOBAL INC.,

DEFENDANTS.

CASE NO.: 1:14-cv-00529

JURY TRIAL DEMANDED

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

INTRODUCTION

Unless a patent applicant expressly defines claim terms in the specification or during prosecution, there is a heavy presumption that the terms should be given their plain and ordinary meaning to a person of ordinary skill in the art. The parties agree that the disputed claim terms are terms of art that are well-understood to persons of ordinary skill, and that none of the terms are specifically defined in the patent's specification or prosecution history. For this reason, the Court should find that no construction is necessary for *any* of the eight disputed terms, as Defendants propose. *See, e.g., Cisco Sys., Inc. v. Innovative Wireless Solutions, LLC*, Nos. 1:13-CV-00492, 1:13-CV-00504, 2015 WL 128138, at *15 (W.D. Tex. Jan. 8, 2015) (finding no construction necessary for "MAC layer" where "the use of MAC layer is consistent with its usage in the specification and would be easily understood by a person having ordinary skill in the art"); *see also Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 761 F.3d 1329, 1341 (Fed. Cir. 2014) (adopting "plain meaning interpretation" in light of an ordinary artisan's understanding of the specification). There are three additional reasons the Court should adopt Defendants' proposed constructions.

First, Dynamic 3D concedes that the disputed claim terms are not expressly defined in the specification contrary to their plain meaning. Nonetheless, Dynamic 3D seeks to rewrite the claim language and contends that its proposed constructions are necessary "to assist the jury in understanding the underlying concept[s]." (Pl. Br. at 7, 16, 17, 19, 20.) But courts do not rewrite terms to reflect their "underlying concepts." For example, Dynamic 3D proposes multiple constructions that merely rearrange claim terms and add unsupported verbiage to terms having well-understood meanings as confirmed by the specification. Such an approach is both legal error, *see Rotatable Technologies LLC v. Nokia*, Case No. 2:12-CV-265-JRG, 2013 WL 3992930, at *10-11 (E.D. Tex. Aug. 2, 2013) (concluding "no construction is necessary" where

“proposed construction simply restates the words of the claim in a rearranged order and then appends an extraneous limitation that is without support in the claims”), and *unhelpful* to the jury. *Securus Techs., Inc. v. Global Tel*Link Corp.*, No. 3:13–CV–03009–K, 2015 WL 356872, at *6 (N.D. Tex. Jan. 27, 2015) (“Simply reusing the phrase ... and rearranging the order of the other words in the phrase does not help a jury understand what [the disputed term] is.”).

Second, Dynamic 3D also (repeatedly) proposes that the Court read in long, convoluted phrases applying to preferred embodiments. For example, Dynamic 3D replaces the words “dynamic” and “manipulable” with, respectively, 36-word and 17-word phrases that require real-time updating, multiple views, and interactive features. That too, is legal error, *Hill-Rom Services, Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“While we read claims in view of the specification, of which they are a part, we do not read limitations from the embodiments in the specification into the claims.”), and unhelpful to the jury. Moreover, Dynamic 3D’s imported limitations are already present in dependent claims, rendering them presumptively improper under the doctrine of claim differentiation. *InterDigital Commc’ns, LLC v. Int’l Trade Comm’n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012) (“The doctrine of claim differentiation is at its strongest in this type of case, where the limitation that is sought to be read into an independent claim already appears in a dependent claim.” (internal quotation and citation omitted)).

Third, Dynamic 3D relies heavily on extrinsic evidence. But there is no need to resort to extrinsic evidence here, where, as Dynamic 3D admits, the claim terms are “well understood” and “used extensively throughout the specification.” (Pl. Br. at 7.) Dynamic 3D’s approach, evidenced by its repeated citation to dictionary definitions for disputed terms, has long been discredited. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1320 (Fed. Cir. 2005) (*en banc*) (rejecting

claim construction methodology that “placed too much reliance on extrinsic sources”). Regardless, Dynamic 3D fails to explain how those definitions support adding its proposed verbiage, found nowhere in the definitions. For example, Dynamic 3D cites definitions for “correlation” and “well logs” to construe “performing well log correlation operations,” but ultimately proposes a construction that includes those terms themselves: “performing steps for *correlating* data points between *well log* datasets.” That makes no sense. *Securus Tech.*, 2015 WL 356872, at *6. And for the term “stratigraphic erosional rules,” Dynamic 3D cites definitions of “stratigraphic” and “erosion,” but proposes a construction that still uses “stratigraphic” while eliminating the claim limitation “erosion”: “rules for execution of stratigraphic relationships.” Using dictionaries to eliminate express claim terms and change the explicit scope of claim language is prohibited by the very authority Dynamic 3D cites. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (“[Extrinsic evidence] may not be used to vary or contradict the claim language.”).

In short, Dynamic 3D’s constructions are a transparent effort to distract from the fact that the ’319 patent claims, as written, read squarely onto the prior art. Dynamic 3D’s constructions violate fundamental claim construction principles and would only confuse a jury. (*See* Ex. A, Dynamic 3D’s Proposed Constructions Incorporated Into Claims.) Defendants ask this Court to adopt the plain meaning of the terms with no further construction.

ARGUMENT

A. “performing well log correlation operations”

Claims	Dynamic 3D’s Proposed Construction	Defendants’ Proposed Construction
1, 49	performing steps for correlating data points between well log datasets	Plain and ordinary meaning – no construction necessary

The parties agree “performing well log correlation operations” is a well-known term of art that has a plain meaning. (Defs. Br. at 6-7; Pl. Br. at 7 (“at no place in the patent does one find a specific definition of these terms, since they are terms of art that would be well understood by any experienced geoscientist . . .”). The parties further agree the applicants did not define the term in the patent. (*Id.*) For this reason, the Court should find that no construction is necessary, as Defendants propose. *See Cisco Sys., Inc.*, 2015 WL 128138, at *15 (finding no construction necessary for “MAC layer” where “the use of MAC layer is consistent with its usage in the specification and would be easily understood by a person having ordinary skill in the art”); *see also Amdocs (Isr.) Ltd.*, 761 F.3d at 1341 (adopting “plain meaning interpretation” in light of an ordinary artisan’s understanding of the specification).

Dynamic 3D seeks to rewrite the claims to “assist the jury,” but its proposed construction simply adds needless verbiage. It repeats the same words from the disputed term “performing,” “well log,” and “correlating,” acknowledging that those words need no construction. *See Astute Tech., LLC v. Learners Digest Int’l LLC*, No. 2:12–CV–689–JRG, 2014 WL 1385191, at *18-19 (E.D. Tex. Apr. 2, 2014) (rejecting construction that “rearranges words from the disputed term itself (‘display device’ is a ‘device that displays ...,’) and besides not being helpful, supports the notion that the disputed term has a well understood meaning”). The remaining word, “operations,” is readily understood by a judge or jury and needs no special construction. *Katrinecz v. Motorola Mobility LLC*, No. 1:12–CV–235–LY, 2014 WL 60328, at *4-5 (W.D.

Tex. Jan. 6, 2014) (finding “[n]o further definition is required” when “the ordinary meaning of the claim language as understood by a person of skill in the art may be readily apparent even to lay judges” (quotation and citation omitted)).

Dynamic 3D attempts to import “correlating data points” and “well log datasets” into the claim, but this is neither helpful to the jury nor supported by the intrinsic record. Indeed, neither phrase appears in the intrinsic record. *Source Vagabond Sys. Ltd. v. Hydrapak, Inc.*, 753 F.3d 1291, 1299-1300 (Fed. Cir. 2014) (rejecting claim construction that adds language unsupported by the intrinsic record into the claims). For example, there is no mention of “correlating data points” or “well log datasets” in the portions of the specification Dynamic 3D cites to support its construction. (Pl. Br. at 8.) Instead, Dynamic 3D’s examples list general operations – *e.g.*, interactive zone averaging; displaying wells, logs, picks, and grids; defining, editing, and interpretation of intervals – that are not limited to “data points” and “datasets.” *Id.*

There is no need to resort to extrinsic evidence here, where, as Dynamic 3D concedes, the claim term is “well understood” and “used extensively throughout the specification.” (Pl. Br. at 7.) *Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*, 709 F.3d 1348, 1358 (Fed. Cir. 2013) (“[W]e see no reason to resort to consideration of extrinsic evidence, given the clarity of the claim term itself and the support within the specification ...”). Although Dynamic 3D cites dictionary definitions for the terms “correlation” and “well logs,” it ultimately does not rely on those definitions. Instead, Dynamic 3D reuses the original claim terms and adds needless verbiage, confirming that its proffered extrinsic evidence is unhelpful. And just like the intrinsic record, neither definition includes the phrases “correlating data points” or “well log datasets.”

The parties agree that this term has a well-understood meaning and is well-supported in the specification. This Court should reject Dynamic 3D's rewrite of claim language with extraneous, unsupported phrases and find no construction is necessary.

B. “forming dynamic cross-sections”

Claims	Dynamic 3D's Proposed Construction	Defendants' Proposed Construction
1 , 49	forming cross-sections of a predetermined geological region reflecting geophysical data and well log data which can be changed interactively by the user in one view and which update in real-time in all views in response to said change	Plain and ordinary meaning – no construction necessary

Dynamic 3D's proposed construction reuses the words “forming” and “cross-sections,” but substitutes “dynamic” with the **36-word phrase** “of a predetermined geological region reflecting geophysical data and well log data which can be changed interactively by the user in one view and which update in real-time in all views in response to said change.” The word “dynamic” has a plain meaning and does not require construction. Dynamic 3D's attempt to use the term “dynamic” to import 36-words of extraneous limitations from the specification is improper.

The jury does *not* need Dynamic 3D's 36-word phrase to understand the meaning of “dynamic.” As explained in Defendants' Opening Brief, the intrinsic record does not redefine the common word “dynamic.” (Defs. Br. at 8-9.) Dynamic 3D agrees. (Pl. Br. at 9 (“the inventor does not provide an explicit definition for the term in the patent”).) Although Dynamic 3D cites various embodiments from the specification as support, none rises to the level of a “clearly express[ed] intent to redefine the term.” *Hill-Rom Servs.*, 755 F.3d at 1371 (quotation and citation omitted); *see also EPOS Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1341 (Fed. Cir. 2014) (“[I]t is improper to read limitations from a preferred embodiment described in

the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” (quotation and citation omitted)).

Dynamic 3D’s cited embodiments actually describe “real-time” and “interactive” aspects of the three-dimensional geological modeling system *as a whole*. (See Pl. Br. at 12.) The specification does not tie the embodiments to the claim terms “dynamic” or “dynamic cross-sections.” See, e.g., *id.* (“The cross-sections are *part of a process and system* that is characterized as a ‘real-time three-dimensional interpretation environment.’” (emphasis added)). The Court should reject Dynamic 3D’s attempt to import lengthy limitations using the single word “dynamic.” See *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 990 (Fed. Cir. 1999) (“[T]here must be a textual reference in the actual language of the claim with which to associate a proffered claim construction.”); *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (“Without any claim term that is susceptible of clarification by the written description, there is no legitimate way to narrow the property right.”)

Importantly, Dynamic 3D concedes that it imports the “real-time” and “interactive” aspects of the preferred embodiments from dependent claims, thereby violating principles of claim differentiation. *InterDigital Commc’ns*, 690 F.3d at 1324-25 (“The doctrine of claim differentiation is at its strongest in this type of case, where the limitation that is sought to be read into an independent claim already appears in a dependent claim.” (internal quotation and citation omitted)); *Trebro Mfg., Inc. v. FireFly Equip., LLC*, 748 F.3d 1159, 1167 (Fed. Cir. 2014) (“To read the ... limitation from claim 10 into claim 1 (even though claim 10 also includes [the limitation]) renders the term redundant and offends principles of claim differentiation.”). Dynamic 3D relies on dependent claims 3 and 4 for the proposition that “‘dynamic’ clearly refers

to cross-sections which can be changed interactively by the user in one view and which update in real-time in all views in response to said change.” (Pl. Br. at 12; *see, e.g.*, ’319 patent, cl. 3 (“automatic reprojection of well trajectories into the cross-sections”), cl. 4 (“drag & drop repositioning of cross-section in basemap with immediate updates in multi-dimensional correlation views”).) Dynamic 3D’s construction, however, renders dependent claims 3 and 4 redundant, a result precluded by the doctrine of claim differentiation. *Trebro*, 748 F.3d at 1167.

Dynamic 3D’s “update” limitation is also improper because it renders superfluous claim language. The term “update” is separately recited in another element of independent claims 1 and 49. (*See, e.g.*, ’319 patent, claims 1, 49 (“automatically updating”).) The patentee chose to distinguish the terms “dynamic” and “update” in the claim language, and Dynamic 3D’s attempt to conflate their meanings is improper. *Astute Tech.*, 2014 WL 1385191, at *19 (rejecting “[proposed construction] as being superfluous with surrounding claim language” where “language ... is separately recited in the claims”); *see also Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008) (“[T]he use of two terms in a claim requires that they connote different meanings” (quoting *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n.3 (Fed. Cir. 2006))); *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”).

Dynamic 3D’s lengthy construction is inconsistent with claim construction principles and clarifies nothing for the jury. *SourceProse Corp. v. AT&T Mobility, LLC*, No. A-11-CV-117-LY, 2014 WL 2879694, at *11 (W.D. Tex. June 24, 2014) (“[T]he lengthy construction Defendants seek in order to ‘clarify’ the claim language is unhelpful in light of the relatively

simple language of the claim as it exists.”). The Court should adopt plain meaning without further construction.

C. “presenting manipulable three-dimensional geological interpretations of two-dimensional geological data”

Claims	Dynamic 3D’s Proposed Construction	Defendants’ Proposed Construction
1, 49	presenting three-dimensional geological interpretations of two-dimensional geological data that permit changes to be made in real time to the interpretation in an interactive three-dimensional environment	Plain and ordinary meaning – no construction necessary

In its Opening Brief, Dynamic 3D proposes for the first time a new construction for the term “presenting manipulable three-dimensional geological interpretations of two-dimensional geological data.” Its new construction leaves out the phrase “geological interpretations of two-dimensional” from its original construction. Despite the parties exchanging and filing three rounds of claim term charts—the last one just three days prior to filing Opening Briefs—and meeting and conferring in advance of those filings,¹ Dynamic 3D failed to indicate its new construction to Defendants until arguing it in its Opening Brief. Dynamic 3D’s failure to provide notice prejudices Defendants, and its arbitrary dropping of phrases without explanation further demonstrates that its constructions are ungrounded and unsupported, and should be rejected.

Dynamic 3D’s new amendment is improper, because it simply drops the express claim phrase “geological interpretations of two-dimensional” without providing additional clarity in the construction. Dynamic 3D fails to explain how its construction stays true to the original claim

¹ Pursuant to this Court’s Scheduling Order (Dkt. 54), the parties exchanged Claim Construction Statements on January 8, 2015, filed a Joint Claim Construction Chart on January 13, 2015 (Dkt. 119), and filed an Amended Joint Claim Construction Chart on February 9, 2015 (Dkt. 122-1). Dynamic 3D maintained its original proposed construction throughout this process. Three days later on February 12, 2015, Dynamic 3D filed its Opening Brief which proposed for the first time an amended construction striking out the phrase “geological interpretations of two-dimensional.”

scope; the limitation for “two-dimensional” geological data appears to be lost. *See SanDisk Corp. v. Kingston Tech. Co.*, 695 F.3d 1348, 1368 (Fed. Cir. 2012) (rejecting construction that “improperly ignores express limitations of the claims”). And the core dispute remains—whether the commonly used and understood word “manipulable” should be substituted with the 17-word phrase “that permit changes to be made in real time to the interpretation in an interactive three-dimensional environment.” Dynamic 3D’s proposal is unsupported by the intrinsic record, and a jury would understand the plain meaning of “manipulable” as used in the claims without further construction.

Dynamic 3D again relies on preferred embodiments from the specification to support its narrowing of the claim language. (Pl. Br. at 13-15.) None of Dynamic 3D’s cited embodiments express a “clear intent” to limit the term “manipulable” or use it as a textual reference to import Dynamic 3D’s proposed limitations.² *Cisco Sys.*, 2015 WL 128138, at *11 (“The court will not engage in rewriting lengthy claim phrases without specific textual guidance in the specification or intrinsic record.”); *Johnson Worldwide Assocs.*, 175 F.3d at 990; *Renishaw*, 158 F.3d at 1248. Moreover, Dynamic 3D’s embodiments are already present in dependent claims:

² The ’319 patent only discloses “descriptions of the preferred embodiments.” (’319 patent, 20:61-62; *see id.* at 20:64-67 (“the claimed subject matter is not intended to be limited to the embodiments shown herein but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.”).) *See EPOS Techs.*, 766 F.3d at 1341 (“[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.”).

Dynamic 3D Specification Support	Dependent Claim
“A real-time three-dimensional interpretation environment is characterized by the fact that all changes to the interpretation are immediately updated in the three-dimensional, cross-sectional, and base map views.” 6:17-21	Claim 9: The system of claim 1 . . . for immediately updating all interpretational changes in all views of said manipulable three-dimensional geological interpretations.
“The system allows a user to add, edit or delete tops and fault picks in all windows, including three-dimensions.” 11:11-13.	Claim 5: The system of claim 1 . . . for 3-D graphical drag & drop of surface & fault picks for said predetermined geological region.
“FIGS. 39 and 40 provide views of interwell pick interpretation in association with manipulation of the present system.” 15:18-19.	Claim 21: The system of claim 1 . . . for interwell pick interpretation in association with manipulation of said manipulable three-dimensional geological interpretations.
“The disclosed system allows the interpreter to . . . observe the immediate re-projection of these wells in the two dimensional cross-section view.” 19:16-19.	Claim 3: The system of claim 1 . . . for automatic reprojections of well trajectories into the cross-sections.

Once again, Dynamic 3D’s importation of embodiments claimed in dependent claims offends the principle of claim differentiation. *InterDigital Commc’ns*, 690 F.3d at 1324; *Trebro Mfg.*, 748 F.3d at 1167. As discussed above, the patent does not redefine “manipulable” or disclaim its plain meaning. Dynamic 3D cannot overcome the presumption that its proffered importation of limitations absent from the independent claim is erroneous. *SanDisk*, 695 F.3d at 1361 (finding claim differentiation doctrine not overcome where party “has not identified any intrinsic evidence that overcomes this presumption and justifies its narrow construction”).

Finally, Dynamic 3D attempts to import the limitations “real-time” and “interactive” into the claims. But reading those words—that the patentee used in the specification and purposely did not use in the claims—into the claims now to artificially narrow their scope is improper. *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 807 (Fed. Cir. 2007) (“[Patentees] could have used the word ‘perpendicular,’ as they did in discussing their preferred embodiment. Instead, they chose a different term that implies a broader scope.”).

As Defendants explained in their Opening Brief, the term “manipulable” is used in several plain meaning contexts in the specification without any special definitions or disavowals. (Def. Br. at 11.) Dynamic 3D’s transparent attempt to import extraneous limitations from the specification into the plain term “manipulable” is unsupported by the intrinsic record. A jury would understand its plain meaning, and no construction is necessary.

D. “automatic reprojections of well trajectories into the cross-sections”

Claims	Dynamic 3D’s Proposed Construction	Defendants’ Proposed Construction
3	automatically updating which wells are projected into the cross-section in response to changes in the cross-section	Plain and ordinary meaning – no construction necessary

“Automatic reprojections of well trajectories into the cross-sections” has a plain meaning that is consistent with its use in the claims and specification, and does not require construction. Dynamic 3D’s proposed construction is unhelpful and unsupported by the specification.

Dynamic 3D expresses concern that the word “reprojection” is confusing for a jury. (Pl. Br. at 15.) But its proposed construction replaces “reprojections [] into the cross sections” in the claim with the more convoluted phrase “*projected* into the cross-section . . . in response to changes in the cross-section.” Dynamic 3D essentially contends that a jury would be confused by the prefix “re-” in “reprojections.” In *SourceProse*, this Court rejected a proposed construction substituting “without user interaction” for “automatically,” finding that it failed to “advance[] the goals of claim construction or make[] the claim language more easily understood by a jury.” 2014 WL 2879694, at *10. Just as in *SourceProse*, “reprojection” needs no “additional clarification” and is not “used in the context of the patent any differently than its plain and ordinary meaning.” *Id.*

The phrase “in response to changes in the cross-section” is neither required by the claim language nor supported by the specification. (Def. Br. at 13.) It also improperly excludes an embodiment described in the specification that expressly teaches automatic reprojections of well trajectories into the cross-sections resulting from changes made to the *lines-of-section in the base map*. (*Id.* (citing ’319 patent, 19:14-19 (“the disclosed system allows the interpreter to change *lines-of-section in the base map* in real-time and to observe the immediate *re-projection* of these wells in the two dimensional *cross-section* view”))).) Importing this limitation into the claims would be legal error. *GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1311 (Fed. Cir. 2014) (“[W]here claims can reasonably [be] interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment, absent probative evidence on the contrary.” (quotation and citation omitted)); *Amdocs (Isr.)*, 761 F.3d at 1341 (adopting plain meaning and reversing construction that excluded embodiment disclosed in specification).

Dynamic 3D’s proposed construction invites legal error; it is unsupported and unhelpful. The Court should adopt Defendants’ proposal that no construction is necessary.

E. “stratigraphic erosional rules”

Claims	Dynamic 3D’s Proposed Construction	Defendants’ Proposed Construction
11, 56	rules for execution of stratigraphic relationships	Plain and ordinary meaning – no construction necessary

Dynamic 3D admits that “stratigraphic erosional rules” has a plain meaning to one of skill in the art and is not redefined in the specification. (Pl. Br. at 16.) Because it has a plain meaning that is used consistently in the claims, specification and in prior art cited in the prosecution history, it needs no construction. (*See* Defs. Br. at 15.)

Dynamic 3D purportedly asks the Court to construe the phrase “to assist the jury in understanding the underlying concept of *erosion rules* in the geosciences.” (Pl. Br. at 16 (emphasis added).) But Dynamic 3D’s proposed construction inexplicably writes out the entire concept of “erosional” and improperly changes the scope of the claim. *See SanDisk Corp.*, 695 F.3d at 1368. Dynamic 3D cites dictionary definitions for “stratigraphic analysis” and “erosion,” but fails to explain how they justify removing “erosional” from the claims. (Pl. Br. at 16.) As a result, while the plain claim language reads “stratigraphic *erosional* rules,” Dynamic 3D’s construction changes the scope to broadly encompass *any* stratigraphic rules. (See Defs. Br. at 15.) Dynamic 3D’s own cited cases dictate that such broadening is improper. *Nystrom v. TREX Co.*, 424 F.3d 1136, 1145 (Fed. Cir. 2005) (“[I]t is improper to read the term to encompass a broader definition simply because it may be found in a dictionary, treatise, or other extrinsic source.”); *Vitronics Corp.*, 90 F.3d at 1584 (“[E]xtrinsic evidence in general ... may be used only to help the court come to the proper understanding of the claims; it may not be used to vary or contradict the claim language”).

Dynamic 3D fails to demonstrate that its construction would assist the jury. The construction still uses “stratigraphic” and “rules” and thus acknowledges they need no clarification. The added words “execution” and “relationships” are unnecessary verbiage and unhelpful. Dynamic 3D cites figures from the specification and dictionary definitions, but there is no apparent connection between this evidence and Dynamic 3D’s added words. (Pl. Br. at 16.) Ignoring the express term “erosional” changes the claim scope and is unhelpful for the jury and Court to assess infringement/invalidity. *See SanDisk Corp.*, 695 F.3d at 1368.

Last, Dynamic 3D argues that its “proposed construction provides context that the *rules* are those of preparing and interconnecting stratigraphic relationships.” (Pl. Br. at 16 (emphasis

in original).) But the intrinsic record provides no basis for this “context”—the words “preparing,” “interconnecting,” and “stratigraphic relationships” are not found in the specification, much less associated with each other or erosional rules. Dynamic 3D’s infirm attempt at clarity has no basis in the intrinsic or extrinsic record and should be rejected by this Court.

F. “conformable mapping operations”

Claims	Dynamic 3D’s Proposed Construction	Defendants’ Proposed Construction
31, 34, 78, 81	creation of a map having conformance relationships	Plain and ordinary meaning – no construction necessary

Dynamic 3D agrees that “conformable mapping operations” has a plain meaning to one of skill in the art and is not redefined in the ’319 patent, but nonetheless proposes rewriting the claim language “to assist the jury.” (Pl. Br. at 17.) Defendants propose that the words in the disputed term, alone and together, are readily understood by a jury and no construction is necessary.

While purporting to assist the jury’s understanding, Dynamic 3D’s proposed construction still uses forms of the words “conformable” and “mapping,” acknowledging that those words need no construction. The remaining word “operations” has a plain meaning readily understood by a jury and is not redefined in the specification. Accordingly, none of the words in the phrase needs further definition. *Katrinecz*, 2014 WL 60328, at *4-5 (finding “[n]o further definition is required” when “the ordinary meaning of the claim language as understood by a person of skill in the art may be readily apparent even to lay judges” (quotation and citation omitted)).

Dynamic 3D nevertheless proposes replacing the word “operations” with unsupported limitations of “creation” and “[conformance] relationships.” As Defendants explained in its Opening Brief, neither the specification nor Dynamic 3D’s cited dictionary definitions support

limiting “conformable mapping operations” to creation of a map. (Def. Br. at 17.) The words “conformance” and “relationships” do not even appear in the specification. Dynamic 3D refers to Figures 58, 59, 62, and 63 and accompanying text in the specification, but none of it supports “creation of a map.” Quite the opposite, the embodiments describe operations on existing maps, e.g., “continually update the three-dimensional interpretation model.” (Pl. Br. at 17-18.) Dynamic 3D’s proposed construction would improperly exclude those embodiments. *Amdocs (Isr.)*, 761 F.3d at 1341 (adopting plain meaning and reversing construction that excluded embodiment disclosed in specification).

The term has a readily understood plain meaning, and there is no reason to rewrite it, as Dynamic 3D proposes. This Court should give this term its plain meaning, and find no construction necessary.

G. “forming fence diagrams of seismic backdrop cross-sections”

Claims	Dynamic 3D’s Proposed Construction	Defendants’ Proposed Construction
41, 87	forming a graphical display of three-dimensional data and interpretations in a two-dimensional perspective view of seismic backdrop cross-sections	Plain and ordinary meaning – no construction necessary

Dynamic 3D proposes substituting “fence diagrams” with “a graphical display of three-dimensional data and interpretations in a two-dimensional perspective view.” This proposed construction is unhelpful to a jury and unsupported by the intrinsic evidence; it should be rejected.

Dynamic 3D seeks to rewrite the claim to “assist the jury in understanding the underlying concept of fence diagrams.” (Pl. Br. at 19.) But as Dynamic 3D concedes, the term “fence diagrams” is understood by one of skill in the art and not redefined in the ’319 patent. (*Id.*); see *Hill-Rom Servs.*, 755 F.3d at 1371. Dynamic 3D similarly admits that Figure 72 in the

specification “provides an excellent example of a fence diagram using seismic backdrop cross-sections,” and further shows seismic cross-sections “arranged in a crisscrossed pattern (*i.e. a fence*).” (Pl. Br. at 19.) For these reasons, this Court should find that “fence diagrams” has a plain meaning with no construction necessary. *See Cisco Sys.*, 2015 WL 128138, at *12-13 (concluding no construction required where “a person of ordinary skill in the art would readily understand the terms as used in the claim and further informed by the specification”).

Further, Dynamic 3D’s proposed phrase “a graphical display of three-dimensional data and interpretations in a two-dimensional perspective view” is not helpful to the jury. Instead, the term “fence” diagram is more intuitive. (*See* ’319 patent, Fig. 72.) And as explained in Defendants’ Opening Brief, Dynamic 3D’s proposed limitations are unsupported by the intrinsic record. (Defs. Br. at 18.) For example, the ’319 patent discloses other features showing graphical displays of three-dimensional data and interpretations in a two-dimensional perspective view. (’319 patent, Figs. 54-57 (showing isochore maps³).) Yet these are not “fence diagrams” as understood by one of skill in the art, nor would the jury perceive them to be. Dynamic 3D’s construction improperly broadens the scope of the claim term to include *any* graphical display of three-dimensional data and interpretations in a two-dimensional perspective view, and should be rejected.

The Court should adopt Defendants’ proposal that no construction is necessary.

³ An isochore map is a graphical display representing three dimensional layer thicknesses in the ground in a two-dimensional map view. (’319 patent, 13:25-36 (isochore thickness grids), Figs. 54-57 (showing two-dimensional map view).)

H. “seismic opacity filtering”

Claims	Dynamic 3D’s Proposed Construction	Defendants’ Proposed Construction
42, 88	filtering, or adjusting the visibility, of certain seismic data	Plain and ordinary meaning – no construction necessary

Dynamic 3D seeks to rewrite a claim term that it admits has plain meaning to one of skill in the art and is not redefined in the ’319 patent. (Pl. Br. at 20.) Dynamic 3D’s proposal is not only unhelpful to a jury, it improperly changes the scope of plain claim language.

Dynamic 3D reuses the words “seismic” and “filtering” in its own proposed construction, and professes to clarify the word “opacity” for the jury. (*Id.* at 21.) But the meaning of “opacity” is readily apparent to a lay judge or jury. *See Katrinecz*, 2014 WL 60328, at *4-5 (finding “luminescent” needs no further definition where “the ordinary meaning of the claim language as understood by a person of skill in the art [is] readily apparent even to lay judges” (quotation and citation omitted)). If necessary, the Court may remedy any confusion by providing a definition of the word “opacity”—without adopting Dynamic 3D’s proposed wholesale rewrite.

Not only is Dynamic 3D’s construction unhelpful, it is unsupported by the intrinsic evidence. For example, neither “adjusting” nor “visibility” appears in the specification, and Dynamic 3D cites no extrinsic evidence to support its construction. Dynamic 3D points to usage of the term “opacity” in the specification, but admits that it has plain meaning and is not “explicitly defined.” *See id.* (“[T]he word ‘luminescent,’ in some form, is used without definition ... within the patent document.”). Dynamic 3D’s ambiguous wording also broadens the claim to encompass all filtering of seismic data, contrary to the plain claim language, which focuses on opacity filtering. (Defs. Br. at 20.) In sum, Dynamic 3D’s proposed construction is improper and should be rejected.

CONCLUSION

Dynamic 3D proposes rewriting claim terms that are well-understood to persons of ordinary skill and not redefined in the patent's specification or prosecution history. But its proposed language is unsupported by the intrinsic record and unhelpful to a jury and should be rejected. Further, Dynamic 3D's attempt to import preferred embodiments into plain claim language is unsupported by the specification and amounts to legal error. And its citation to extrinsic evidence is unnecessary and at any rate fails to support the extraneous verbiage in Dynamic 3D's proposed constructions.

Accordingly, Defendants respectfully request that the Court adopt the plain meaning for each of the eight disputed claim terms and find that no construction is necessary, and grant any other relief the Court deems just.

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Respectfully submitted,

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